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SUPERFUND &
EMERGENCY
MANAGEMENT DIVISION

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MEMORANDUM

SUBJECT: EPA Comments on the draft Feasibility Study Technical Memorandum #2 (FSTM #2) for Smoky Canyon Mine Superfund Site

FROM: Jennifer Crawford, Remedial Project Manager, U.S. EPA Region 10

TO: Arthur Burbank, Remedial Project Manager, U.S. Forest Service

This memorandum captures EPA's comments on the draft Smoky Canyon Mine FSTM #2, prepared and submitted by the J.R. Simplot Company.

General & Specific Comments

1. **Cover Options:** EPA environmental engineer and phytoremediation expert Steve Rock was consulted or input on the cover design alternatives within FSTM2. From his review, EPA recommends that an additional alternative for a single deep layer cover amended native-mimicking soil planted (of depth TBD) with coniferous native forest be considered for review in FSTM2. Rationale, references, and details on this comment are included in the attached document. EPA can additionally discuss details via conference call with the Agencies and Simplot.

2. **Preliminary Remediation Goals:** The PRGs were identified in FSTM1, however only a final chosen value was provided in Table 3-3 and in some cases a range was listed instead of clear summary numerical identification of all factors used in determining the final PRG. EPA requests that FSTM2 add an expanded PRG table 3-3 to the document, building on Table 3-3 from the FSTM1. This updated Table 3-3 would include specifics for all COCs with HQ>1: ARAR criteria value, naturally occuring COC background concentration (as applicable), and the Risk Based criteria. Including these values in one table allows for clear identification and documentation of the chosen PRG for remedy evaluation and begins the specific incorporation of background values to the FS process. The requested format is attached and is consistent with current FSTM1 PRG work ongoing at Conda Mine. The added/updated table 3-3 should also be referenced throughout the document during discussion of alternatives and PRGs.

3. **Identification of "Target Cover Areas":** Add discussion to Section 2.3.1 of the specific decision criteria used for determination of which areas are included for cover remediation and which are not proposed for covers (i.e. Panel A). A table with the all contaminated soil areas listed, decision criteria, specifics regarding loading rates, groundwater travel times and proposed reduction percentage / concentration needs to be identified for quantified assessment of the target areas for cover as included in FSTM2.

4. **Section 2.3.1.3 Alternative WG-3 and Section 3.3.3 AG-3 – Institutional Controls (ICs)**: ICs should not be identified as a stand-alone alternative. ICs can be used for short-term and long-term use during the RI/FS and then after only as a component of the final remedy. As identified in the NCP § 300.430, section iii (D): "EPA expects to use institutional controls such as water use and deed restrictions to

supplement engineering controls as appropriate for short- and long-term management to prevent or limit exposure to hazardous substances, pollutants, or contaminants. Institutional controls may be used during the conduct of the remedial investigation/feasibility study (RI/FS) and implementation of the remedial action and, where necessary, as a component of the completed remedy. The use of institutional controls shall not substitute for active response measures (e.g., treatment and/or containment of source material, restoration of ground waters to their beneficial uses) as the sole remedy unless such active measures are determined not to be practicable, based on the balancing of trade-offs among alternatives that is conducted during the selection of remedy"

5. **Section 2.3.1.6 Alternative WG-6 and 2.3.2.4 Alternative SW-4 – Enhanced Dinwoody Covers, ICs and MNA**: Request that WG-6 be carried forward through the detailed analysis. The rationale states that performance of the Enhanced Dinwoody cover is similar to WG-7 Geomembrane, however the covers are significantly different. Inclusion of the WG-6 in the detailed selection also allows clear documentation for remedy selection at Smoky Canyon in direct comparison and consistency with other phosphate mining sites undergoing CERCLA cleanup within SE Idaho.

6. **Section 2.3.4.4 Alternative S-4 – 5-Foot Dinwoody or Salt Lake Formation/Chert Covers on Uncovered Areas of ODAs and Rock Covers on Soils in Seep and Riparian Areas:** Alternative S-4 is not retained for detailed analysis, as stated "Alternative S-4 would provide the same level of effectiveness as Alternative S-3. The thicker cover would not provide additional protection. It has a significantly higher cost and is therefore NOT RETAINED." Identification of performance or infiltration reduction for both the 2-foot (S-3) and 5-foot (S-4) is not identified in each respective section, so the statement that protection is not increased with a thicker cover is not supported. Provide further information on this determination. It is recommended that the 5-foot cover in S-4 be retained for detailed analysis, as it is consistent with completed cover installed at the Pole Canyon ODA and has current performance data available.

7. **Section 3.1:** Add reference for the nine criteria origin within the National Contingency Plan (40CFR300.430(e)(9)).

8. **Section 4.3:** Selected alluvial groundwater remedy AG-3 includes institutional controls only. This is an inappropriate remedy selection for the site, as ICs cannot constitute the entire remedy for an exposure matrix unless specific requirements (not addressed in FSTM2) are met as identified in the NCP and EPA guidance. In addition, alternative AG-3 does not meet expectations for the return of usable ground waters to their beneficial uses. Based on the 3 alternatives brought forward for this evaluation, only AG-5 is a viable option for use based on EPA policy and CERCLA guidance. Reference sections from the NCP and IC Guidance are below.

§ 300.430 Remedial investigation/feasibility study and selection of remedy.
(iii) *Expectations.* EPA generally shall consider the following expectations in developing appropriate remedial alternatives:
(D) EPA expects to use institutional controls such as water use and deed restrictions to supplement engineering controls as appropriate for short- and long-term management to prevent or limit exposure to

hazardous substances, pollutants, or contaminants. Institutional controls may be used during the conduct of the remedial investigation/feasibility study (RI/FS) and implementation of the remedial action and, where necessary, as a component of the completed remedy. The use of institutional controls shall not substitute for active response measures (e.g., treatment and/or containment of source material, restoration of ground waters to their beneficial uses) as the sole remedy unless such active measures are determined not to be practicable, based on the balancing of trade-offs among alternatives that is conducted during the selection of remedy.
(F) EPA expects to return usable ground waters to their beneficial uses wherever practicable, within a timeframe that is reasonable given the particular circumstances of the site. When restoration of ground water to beneficial uses is not practicable, EPA expects to prevent further migration of the plume, prevent exposure to the contaminated ground water, and evaluate further risk reduction

Institutional Controls: A Guide to Planning, Implementing, Maintaining, and Enforcing Institutional Controls at Contaminated Sites (OSWER 9355.0-89 EPA-540-R-09-001 December 2012):
CERCLA. Under the NCP, the remedy selection process under CERCLA is guided by several expectations. These include: (1) treatment should be used wherever practicable to address principal threat wastes; 10 (2) groundwater should be returned to its beneficial use wherever practicable in a reasonable time frame; 11 and (3) ICs should supplement engineering controls as appropriate to prevent or limit exposure, but ICs normally "shall not substitute for active response measures…as the sole remedy unless such active measures are determined not to be practicable, based on the balancing of trade-offs among alternatives that is conducted during the selection of remedy."12Thus, consistent with the NCP, an IC-only remedy may be appropriate under certain circumstances. The remedy selection process that culminates in an IC-only ROD should be carried out consistent with the statute (e.g., on-site remedial actions must meet or waive ARARs pursuant to section 121(d)) and the NCP, including provisions which address expectations (e.g., 40 CFR 300.430(a)(1)(iii)(D)), developing a range of alternatives (40 CFR 300.430(e)(1) and (2)), and analyzing alternatives through the nine-criteria analysis (40 CFR 430(e)(9)). ICs often play an important role by minimizing the potential for exposure for residual contamination and by protecting engineered remedies; however, as provided in the NCP, ICs are not intended to be a way "around" treatment or groundwater restoration.